

# Technical Note

This release presents labor force and unemployment data for census regions and divisions, states, the Los Angeles-Long Beach metropolitan area, and New York City from the Local Area Unemployment Statistics (LAUS) program (tables 1-4). Also presented are nonfarm payroll employment estimates by state and major industry from the Current Employment Statistics (CES) program (tables 5 and 6). The LAUS and CES programs are both Federal-State cooperative endeavors.

## Labor force and unemployment—from the LAUS program

**Definitions.** The labor force and unemployment data are based on the same concepts and definitions as those used for the official national estimates obtained from the Current Population Survey (CPS), a sample survey of households that is conducted for the Bureau of Labor Statistics (BLS) by the U.S. Census Bureau. The labor force includes both the employed and the unemployed. Employed persons are those who did any work at all for pay or profit in the survey reference week (the week including the 12th of the month) or worked 15 hours or more without pay in a family business or farm, plus those not working who have a job from which they were temporarily absent, whether or not paid, for such reasons as labor-management dispute, illness, or vacation. Unemployed persons are those who did not work at all (in the reference week), have actively looked for a job (sometime in the 4-week period ending with the survey reference week), and are currently available for work; persons on layoff expecting recall need not be looking for work to be counted as unemployed.

**Method of estimation.** Effective January 1996, estimates for all states, the District of Columbia, the Los Angeles-Long Beach metropolitan area, and New York City are produced using estimating equations based on regression techniques. This method utilizes data from several sources, including the CPS, the CES, and state unemployment insurance (UI) data. A detailed description of the estimation procedures is available from BLS upon request. Effective January 1998, estimates for census regions and divisions are obtained by summing the model-based estimates for the component states and then calculating the unemployment rate.

**Annual revisions.** Labor force and unemployment data shown for the prior year reflect adjustments made at the end of each year, usually with January estimates. The adjusted estimates reflect updated population data from the U.S. Census Bureau and any revisions in the other data sources. In addition, data for all states, the District of Columbia, and the two large substate areas noted are adjusted annually to equal the CPS annual averages, usually effective with January estimates. The regional and state data will not sum to national totals obtained from the CPS, since the monthly state estimates are not based directly on the CPS.

**Seasonal adjustment.** Seasonal adjustment of state (and Los Angeles-Long Beach and New York City) labor force levels are computed by aggregating independently seasonally adjusted employment and unemployment levels. Unemployment rates are then computed from these independently adjusted levels. Region and

division levels are calculated as the sum of the levels of the component states. Revisions of historical data for the most recent 5 years are usually made at the beginning of each calendar year, usually coincident with January estimates.

## Employment from the CES program

**Definitions.** Employment data refer to persons on establishment payrolls who receive pay for any part of the pay period which includes the 12th of the month. Persons are counted at their place of work rather than at their place of residence; those appearing on more than one payroll are counted on each payroll. Industries are classified on the basis of their principal activity in accordance with the 2002 version of the North American Industry Classification System.

**Method of estimation.** The employment data are estimated using a “link relative” technique in which a ratio (link relative) of current-month employment to that of the previous month is computed from a sample of establishments reporting for both months. The estimates of employment for the current month are obtained by multiplying the estimates for the previous month by these ratios.

**Annual revisions.** Employment estimates are adjusted annually to a complete count of jobs, called benchmarks, derived principally from tax reports which are submitted by employers who are covered under state unemployment insurance (UI) laws. The benchmark information is used to adjust the monthly estimates between the new benchmark and the preceding one and also to establish the level of employment for the new benchmark month. Thus, the benchmarking process establishes the level of employment, and the sample is used to measure the month-to-month changes in the level for the subsequent months.

**Seasonal adjustment.** Payroll employment data are seasonally adjusted at the statewide supersector level. In some states, the seasonally adjusted payroll employment total is computed by aggregating the independently adjusted supersector series. In other states, the seasonally adjusted payroll employment total is independently adjusted. Revisions of historical data for the most recent 5 years are made once a year, coincident with annual benchmark adjustments.

**Caution on aggregating state data.** State estimation procedures are designed to produce accurate data for each individual state. BLS independently develops a national employment series; state estimates are not forced to sum to national totals. Because each state series is subject to larger sampling and nonsampling errors than the national series, summing them cumulates individual state level errors and can cause significant distortions at an aggregate level. Due to these statistical limitations, BLS does not compile a “sum-of-states” employment series, and cautions users that such a series is subject to a relatively large and volatile error structure.

## Reliability of the estimates

The estimates presented in this release are based on sample survey and administrative data and thus are subject to sampling and other

types of errors. Sampling error is a measure of sampling variability—that is, variation that occurs by chance because a sample rather than the entire population is surveyed. Survey data also are subject to nonsampling errors, such as those which can be introduced into the data collection and processing operations. Estimates not directly derived from sample surveys are subject to additional errors resulting from the special estimation processes used. The sums of individual items may not always equal the totals shown in the same tables because of rounding. With respect to the LAUS program, unemployment rates are computed, in most instances, from unrounded data rather than from data that may be displayed in the tables; differences, however, are generally insignificant.

**Labor force and unemployment estimates.** Measures of sampling error, in the form of standard errors for state annual average estimates derived from the CPS, are available in the annual BLS bulletin, *Geographic Profile of Employment and Unemployment*. Measures of nonsampling error for CPS data are not available, but additional information on the subject is provided in the BLS monthly periodical, *Employment and Earnings*.

**Employment estimates.** Measures of sampling error will be available for state CES data at the supersector level and for metropolitan area CES data at the total nonfarm level. Information on

recent benchmark revisions for states is available on the BLS Web site at (<http://www.bls.gov/sae/>).

### **Additional information**

More complete information on the technical procedures used to develop these estimates and additional data appear in *Employment and Earnings*, which is available by subscription from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 (telephone 202-512-1800), and from the *BLS Handbook of Methods*, Bulletin 2490, August 1997.

Estimates of labor force and unemployment for over 330 metropolitan areas are available in the news release, *Metropolitan Area Employment and Unemployment*. Estimates of labor force, employment, and unemployment for all states, metropolitan areas, labor market areas, counties, cities with a population of 25,000 or more, and other areas used in the administration of various federal economic assistance programs are available from the BLS Internet at (<http://www.bls.gov/lau/>). Employment data from the CES program are available at (<http://www.bls.gov/sae/>).

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: 202-691-5200; TDD message referral phone: 1-800-877-8339.